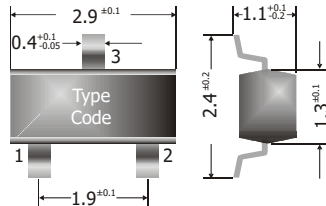


BAS16, BAW56, BAV70, BAV99, BAV199
SMD Small Signal Diodes
SMD Kleinsignal-Dioden
 $I_{FAV} = 215 \text{ mA}$
 $V_{F1} < 715 \text{ mV}$
 $T_{jmax} = 150^{\circ}\text{C}$
 $V_{RRM} = 85, 100 \text{ V}$
 $I_{FSM} = 2 \text{ A}$
 $t_{rr1} < 4 \text{ ns}$

Version 2019-02-14

**SOT-23
(TO-236)**

Dimensions - Maße [mm]

Typical Applications

Signal processing, (High-speed)
 Switching, Rectifying
 Commercial grade
 Suffix -Q: AEC-Q101 compliant ¹⁾
 Suffix -AQ: in AEC-Q101 qualification ¹⁾

Features

BAV199: Extremely low leakage
 BAS16, BAW56, BAV99, BAV70:
 Very high switching speed
 Compliant to RoHS, REACH,
 Conflict Minerals ¹⁾

Mechanical Data ¹⁾

Taped and reeled
 Weight approx.
 Case material
 Solder & assembly conditions

3000 / 7"

0.01 g

UL 94V-0

260°C/10s

MSL = 1

Typische Anwendungen

Signalverarbeitung, (Schnelles)
 Schalten, Gleichrichten
 Standardausführung
 Suffix -Q: AEC-Q101 konform ¹⁾
 Suffix -AQ: in AEC-Q101 Qualifikation ¹⁾

Besonderheiten

BAV199: Extrem niedriger Sperrstrom
 BAS16, BAW56, BAV99, BAV70:
 Sehr schnelles Schalten
 Konform zu RoHS, REACH,
 Konfliktmineralien ¹⁾

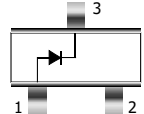
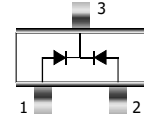
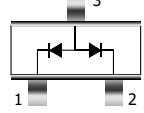
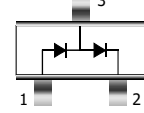
Mechanische Daten ¹⁾

Gegurtet auf Rolle

Gewicht ca.

Gehäusematerial

Löt- und Einbaubedingungen

BAS16/-AQ  Single Diode Type Code 5D 1 = A 2 = n. c. 3 = C	BAV70/-Q/-AQ  Common Cathode Type Code A4 1 = A1 2 = A2 3 = C1/C2
BAW56/-Q  Common Anode Type Code A1 1 = C1 2 = C2 3 = A1/A2	BAV99/-Q/-AQ BAV199/-Q  Series Connection Type Code A7 PX 1 = A1 2 = C2 3 = C1/A2

Maximum ratings ²⁾**Grenzwerte ²⁾**

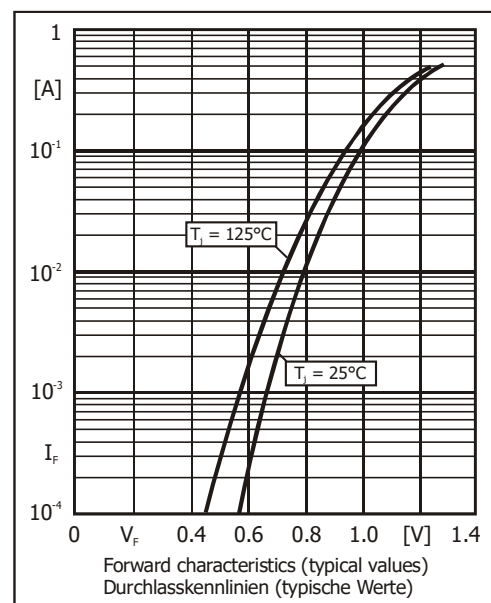
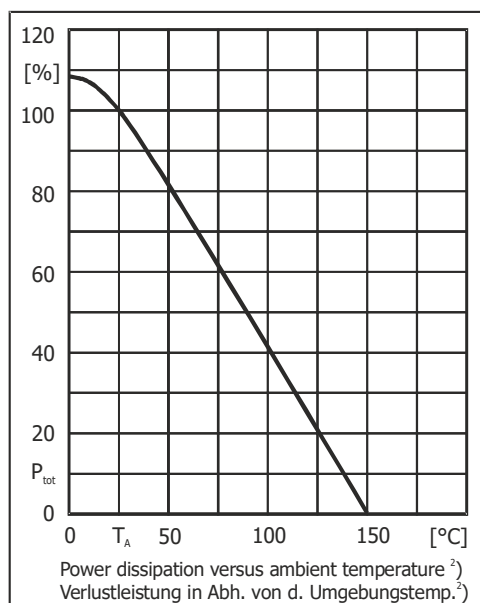
Power dissipation (per device) – Verlustleistung (pro Bauteil)	P_{tot}	350 mW ³⁾
Maximum average forward current Dauergrenzstrom	I_{FAV}	215 mA ³⁾ 125 mA ³⁾
Repetitive peak forward current – Periodischer Spitzenstrom	I_{FRM}	300 mA ³⁾
Non repetitive peak forward surge current Stoßstrom-Grenzwert	$t_p \leq 1 \text{ s}$ $t_p \leq 1 \text{ ms}$ $t_p \leq 1 \mu\text{s}$	I_{FSM} 0.5 A 1 A 2 A
Repetitive peak reverse voltage Periodische Sperrspannung	V_{RRM}	85 V 100 V
Reverse voltage – Sperrspannung	DC	V_R 75 V
Junction/Storage temperature – Sperrschicht-/Lagerungstemperatur	$T_{j/s}$	-55...+150°C

1 Please note the [detailed information on our website](#) or at the beginning of the data book
 Bitte beachten Sie die [detaillierten Hinweise auf unserer Internetseite](#) bzw. am Anfang des Datenbuches

2 $T_A = 25^{\circ}\text{C}$ and per diode, unless otherwise specified – $T_A = 25^{\circ}\text{C}$ und pro Diode, wenn nicht anders angegeben

3 Mounted on 3 mm² copper pads per terminal – Montage auf 3 mm² Kupferbelag (Löt pads) je Anschluss

Characteristics				Kennwerte		
				BAS16/-AQ BAW56 BAV99/-Q/-AQ	BAV70/-Q	BAV199/-Q
Forward voltage Durchlass-Spannung ¹⁾	$T_j = 25^\circ\text{C}$	$I_F =$ 1 mA 10 mA 50 mA 150 mA	V_F	< 715 mV < 855 mV < 1.0 V < 1.25 V	< 715 mV < 855 mV < 1.0 V < 1.25 V	< 900 mV < 1.0 V < 1.1 V < 1.25 V
Leakage current Sperrstrom ¹⁾	$T_j = 25^\circ\text{C}$	$V_R =$ 20 V 25 V 75 V	I_R	– < 30 nA < 1.0 μA	< 25 nA – < 2.5 μA	– – < 5 nA
	$T_j = 150^\circ\text{C}$	$V_R =$ 25 V 75 V	I_R	< 30 μA < 50 μA	< 30 μA < 50 μA	– < 80 nA
Junction capacitance Sperrschichtkapazität	$V_R = 0\text{ V}, f = 1\text{ MHz}$		C_T	< 2 pF	< 2 pF	typ 2 pF
Reverse recovery time Sperrverzögerung	$I_F = 10\text{ mA}$ über/through $I_R = 10\text{ mA}$ bis/to $I_R = 1\text{ mA}$		t_{rr}	< 4 ns	< 4 ns	< 3000 ns
Typical thermal resistance junction to ambient Typischer Wärmewiderstand Sperrschicht-Umgebung			R_{thA}	357 K/W ²⁾		



Disclaimer: See data book page 2 or [website](#)
Haftungsausschluss: Siehe Datenbuch Seite 2 oder [Internet](#)

- 1 Tested with pulses $t_p = 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$
Gemessen mit Impulsen $t_p = 300\text{ }\mu\text{s}$, Schaltverhältnis $\leq 2\%$
- 2 Mounted on 3 mm² copper pads per terminal
Montage auf 3 mm² Kupferbelag (Löt pads) je Anschluss